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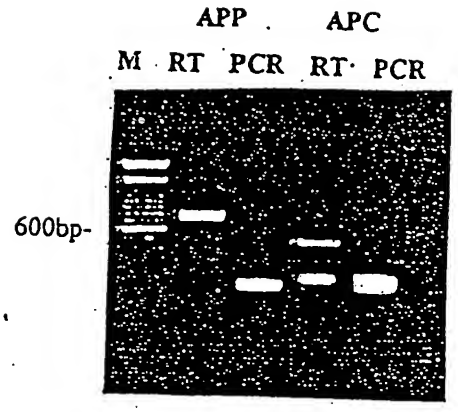
A




B

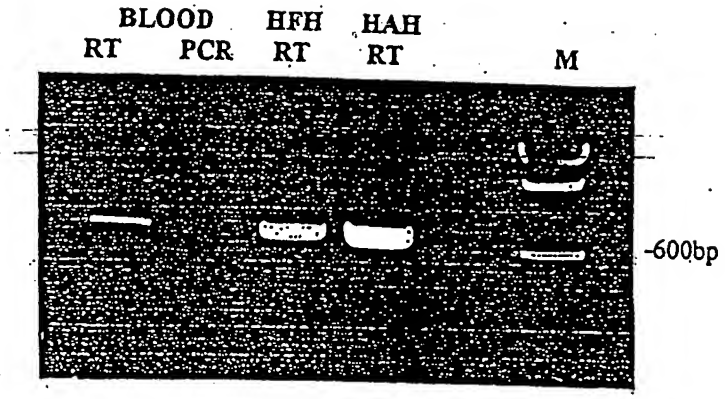



FIGURE 1

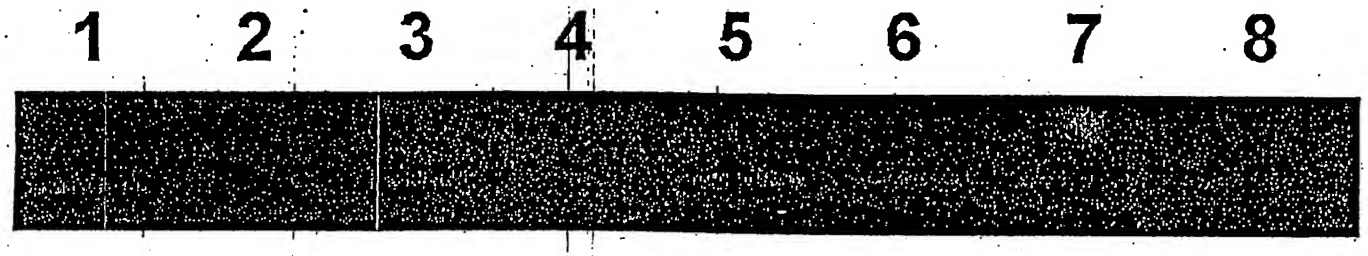



FIGURE 2

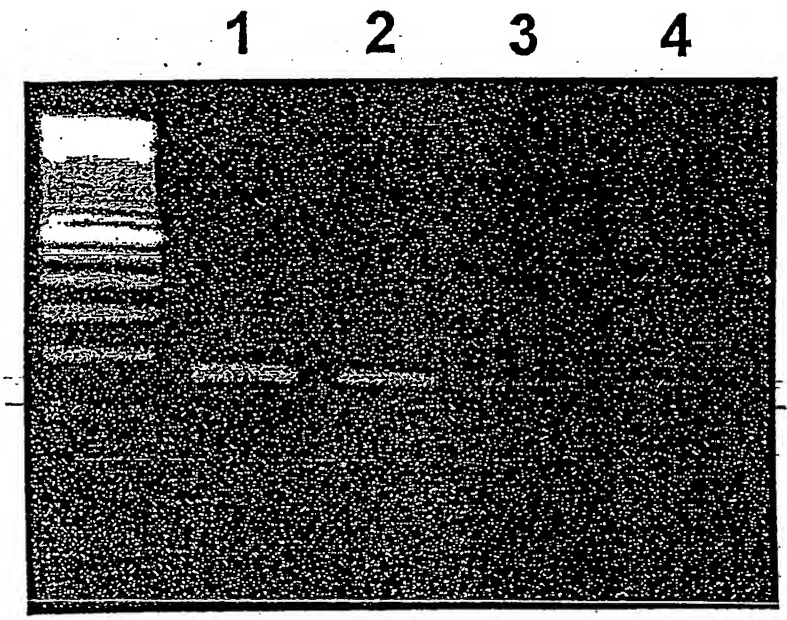



FIGURE 3

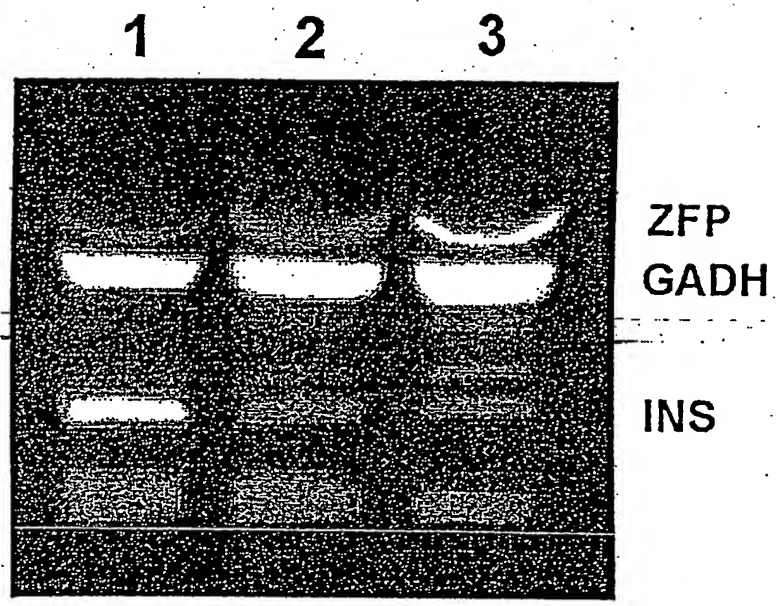
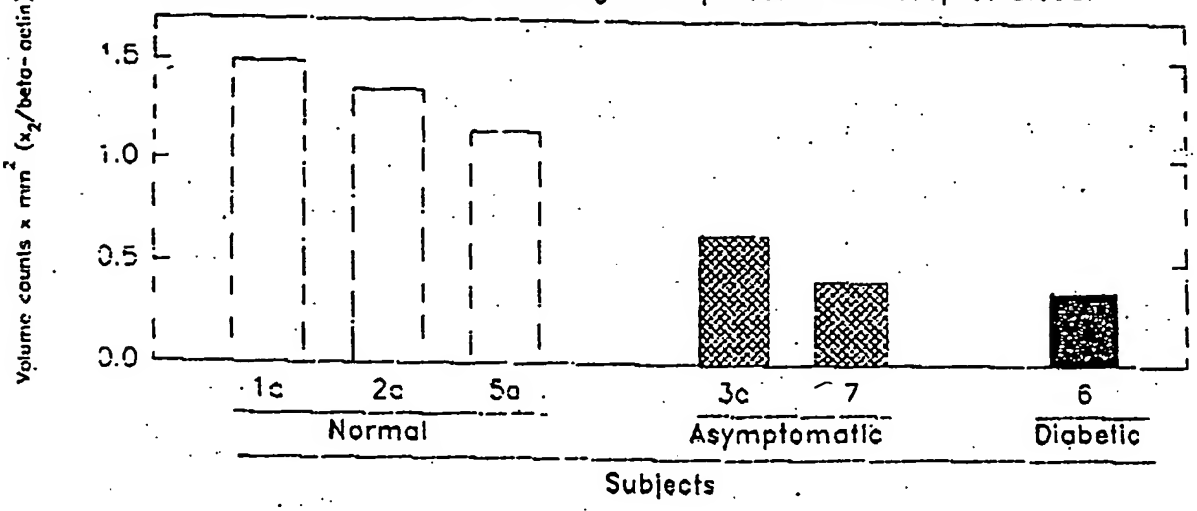
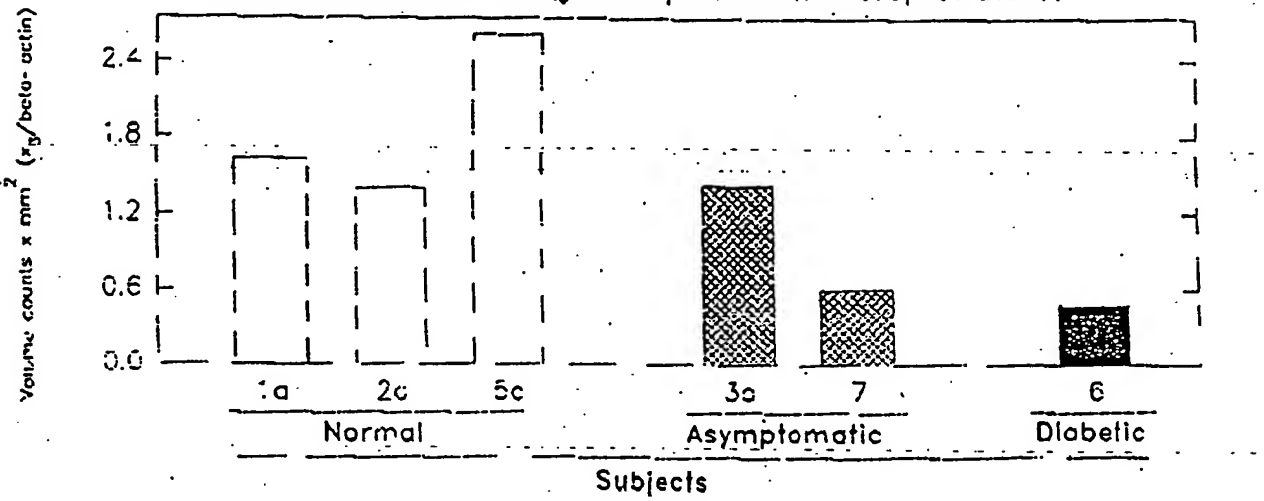



FIGURE 4

A. Standardized levels of insulin gene expressed in a drop of blood.




B. Standardized levels of ZFP gene expressed in a drop of blood.




C. Standardized levels of insulin gene expressed in each fractionated cell from whole blood.

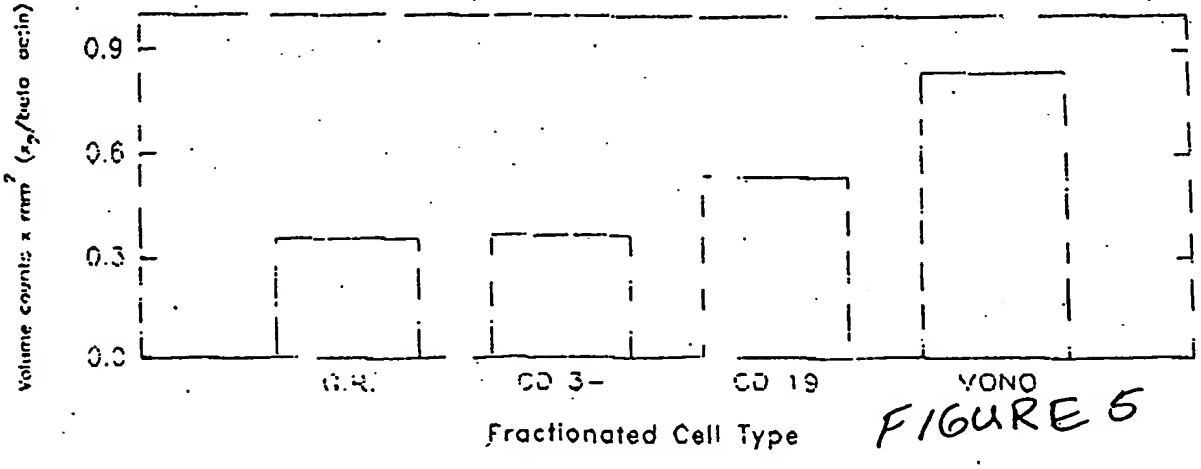



FIGURE 5

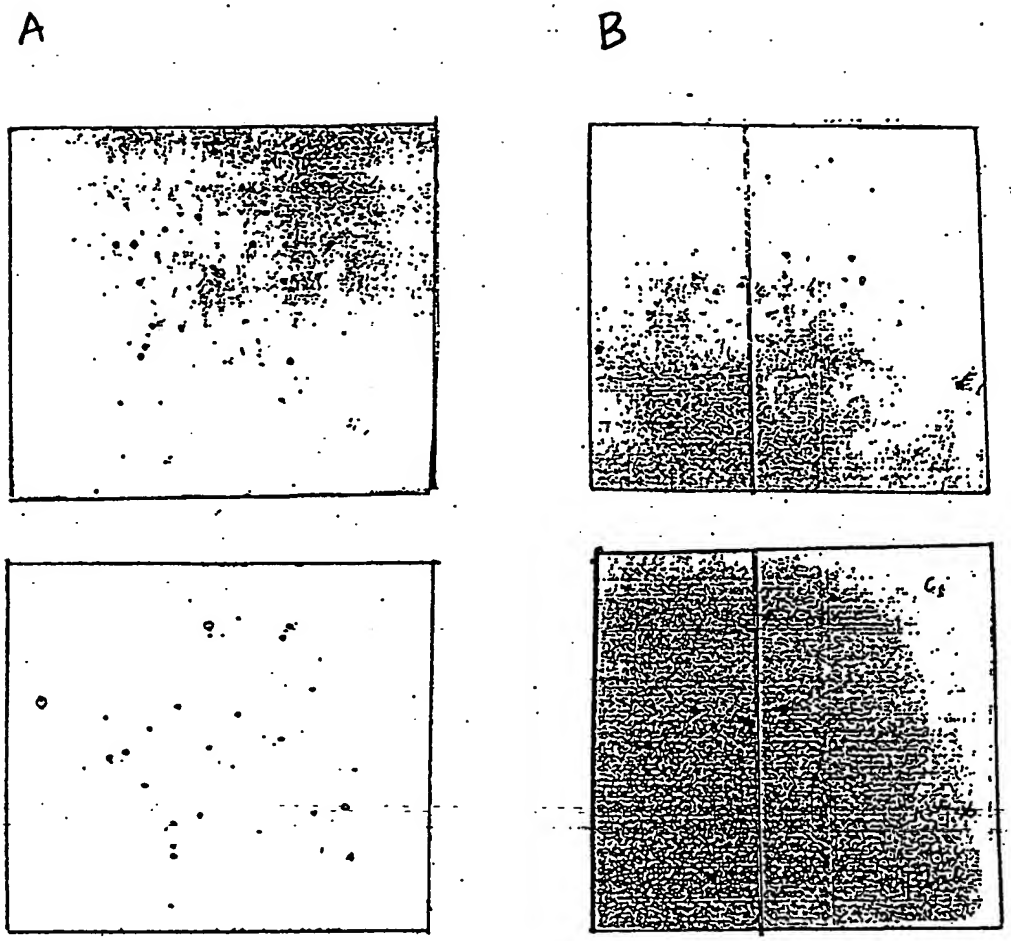
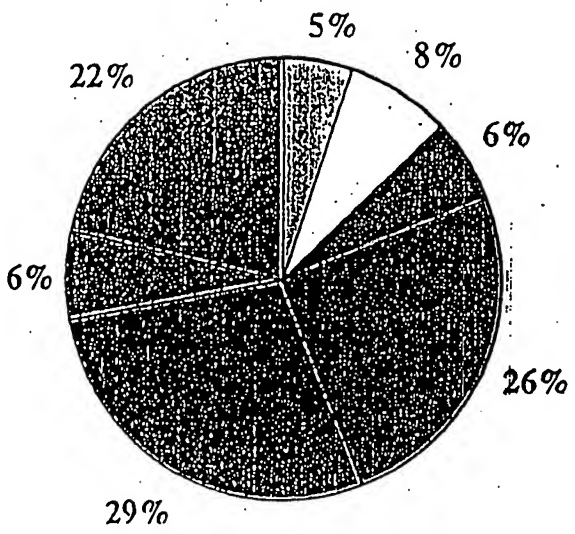



FIGURE 6

Total :13, 283 ESTs
Known: 6,283
Mitochondrial: 405
Ribosome: 498
Repeat: 868
Mis. : 156
Novel: 2,718

Human Blood




- Cell Division
- Cell Signalling/Communication
- Cell structure/Motility
- Cell/organism defense
- Gene/Protein expression
- Metabolism
- Unclassified

Human Fetal Heart

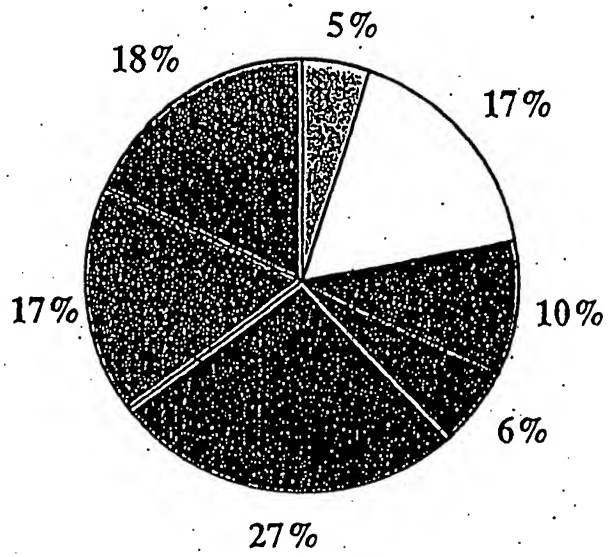
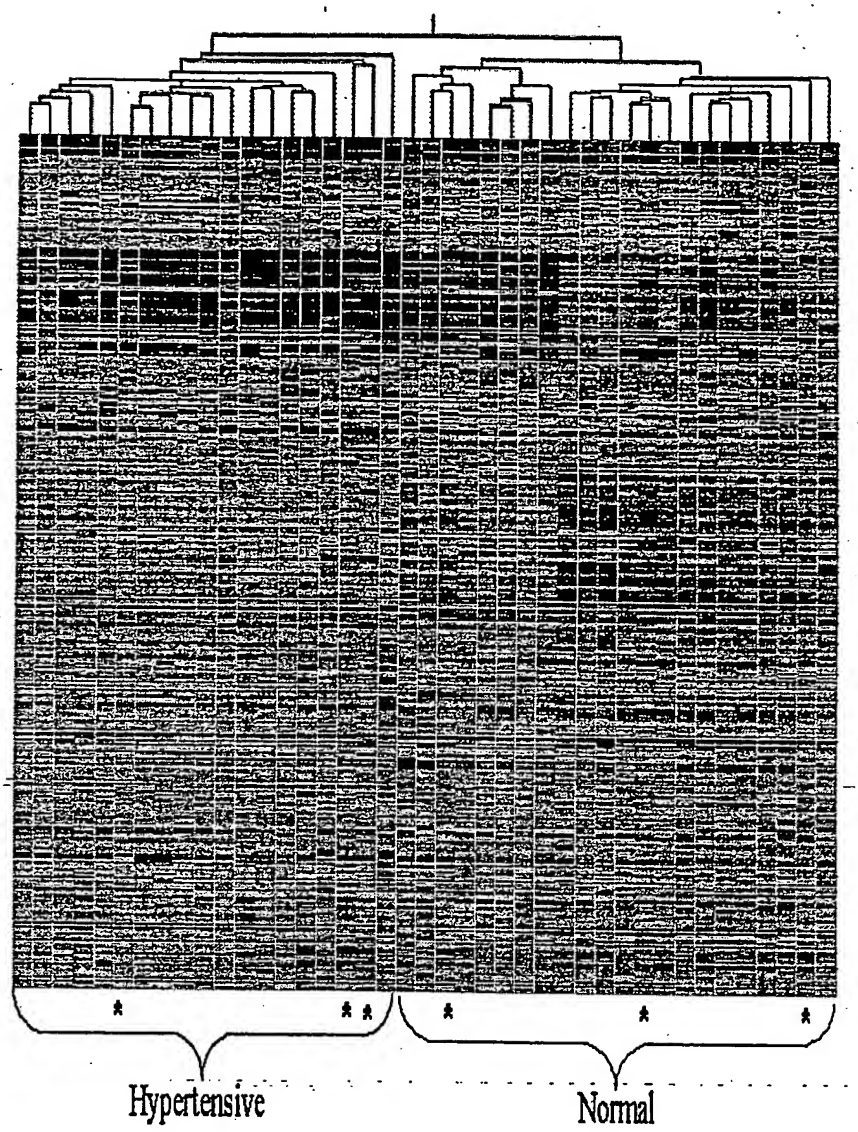



FIGURE 7

Figure 8

Hypertension



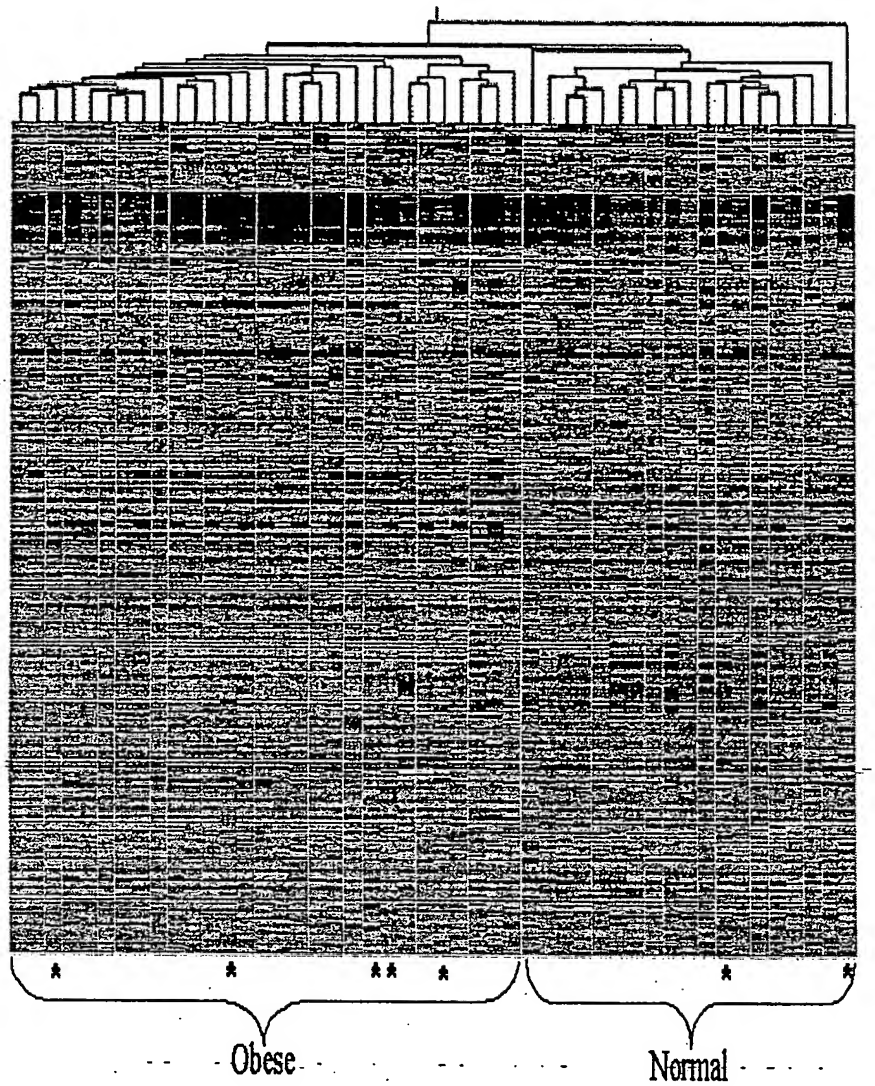

Hypertensive: 19

Normal: 22

Differentially Expressed Genes ($p<0.05$): 861

Figure 9

Obesity



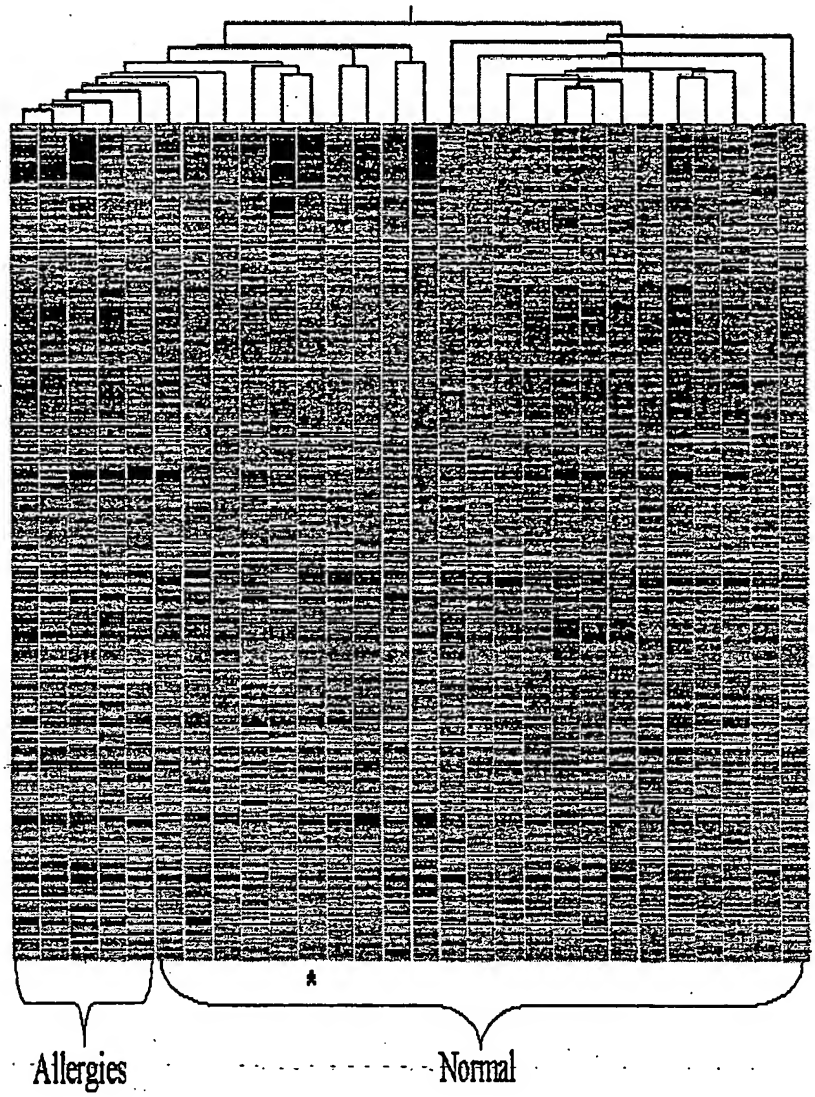

Obese: 25

Normal: 22

Differentially Expressed Genes ($p<0.05$): 913

Figure 10

Allergies



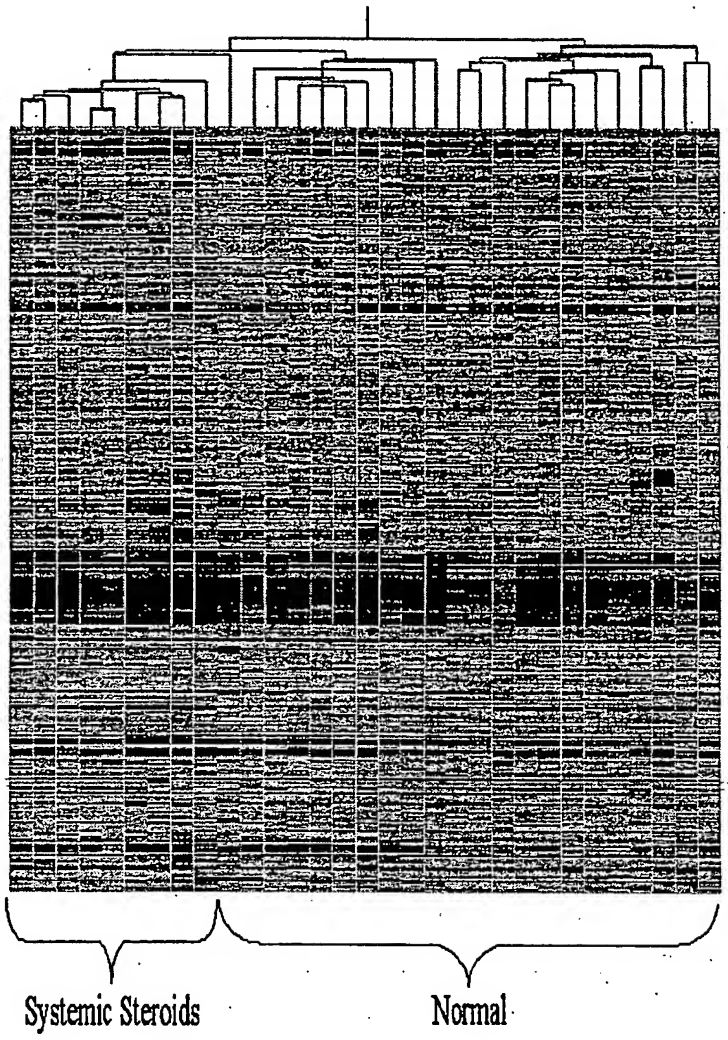

Allergies: 6

Normal: 22

Differentially Expressed Genes ($p<0.05$): 633

Figure 11

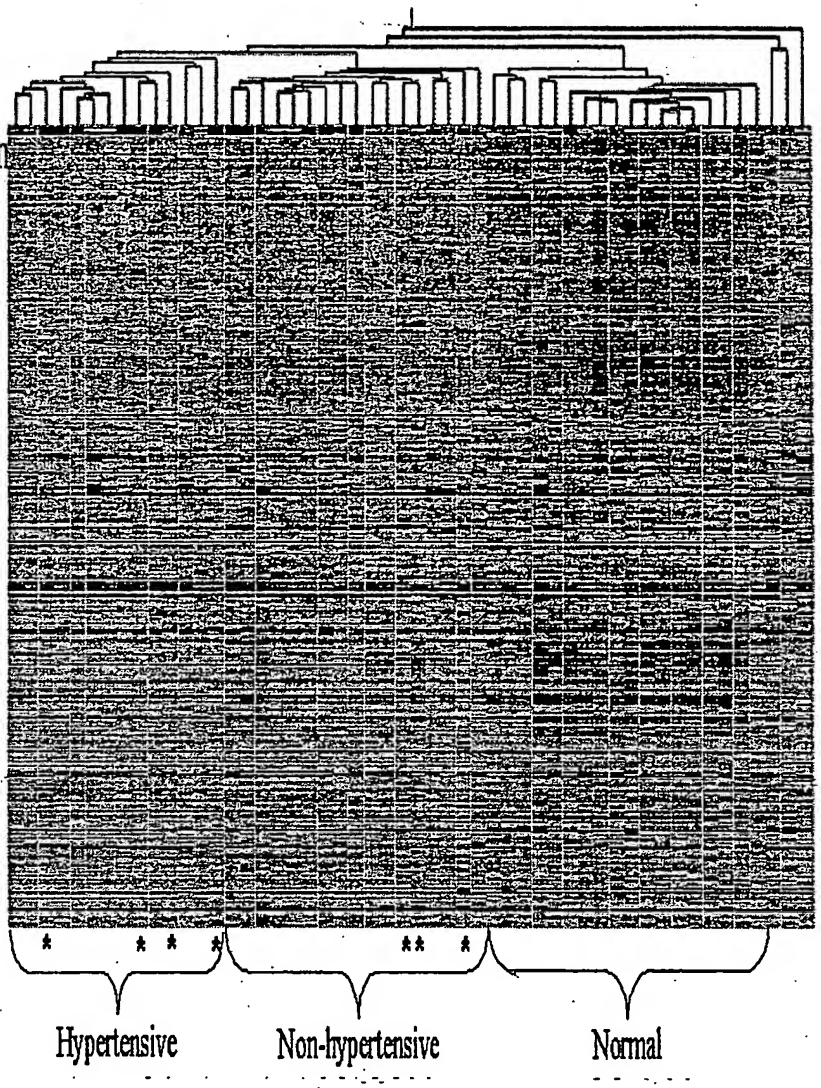
Systemic Steroids




Systemic Steroids: 9
Normal: 22
Differentially Expressed Genes ($p<0.05$): 605

Figure 12

Hypertension




Hypertensive: 10

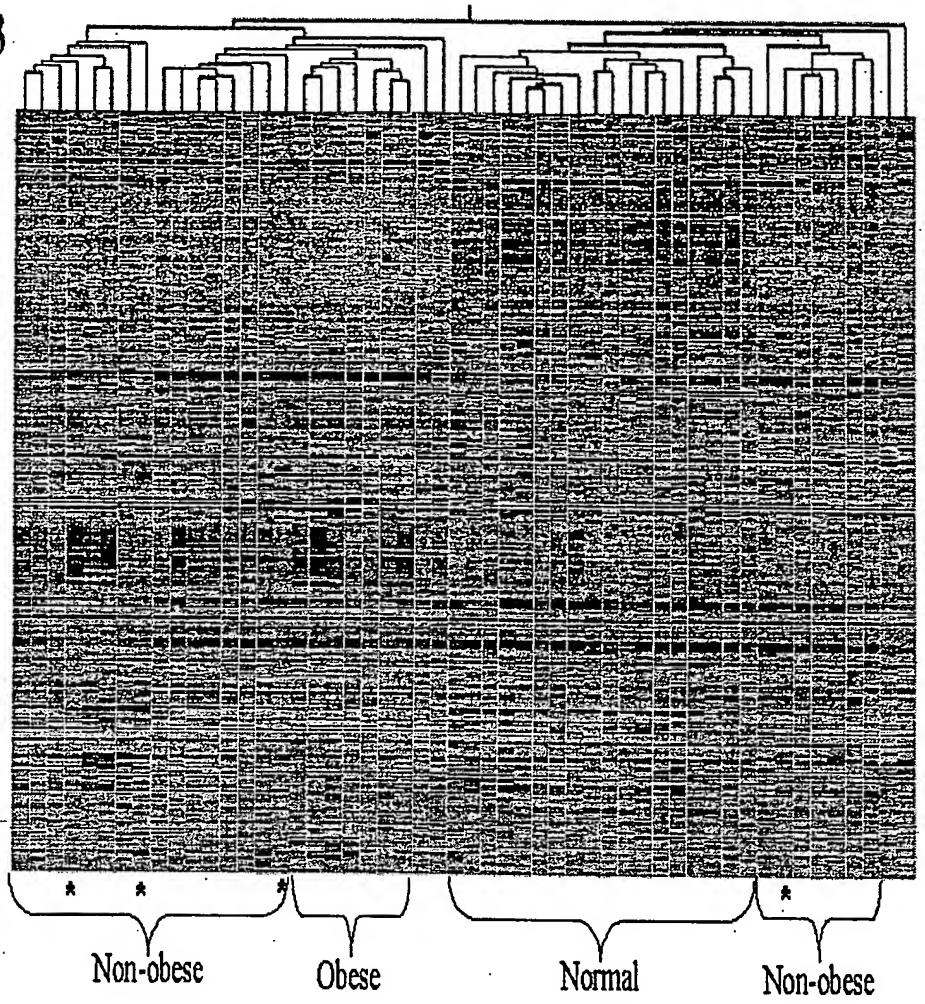
Non-hypertensive: 18

Normal: 24

Differentially Expressed Genes ($p<0.05$): 1,993

Figure 13

Obesity




Obese: 8

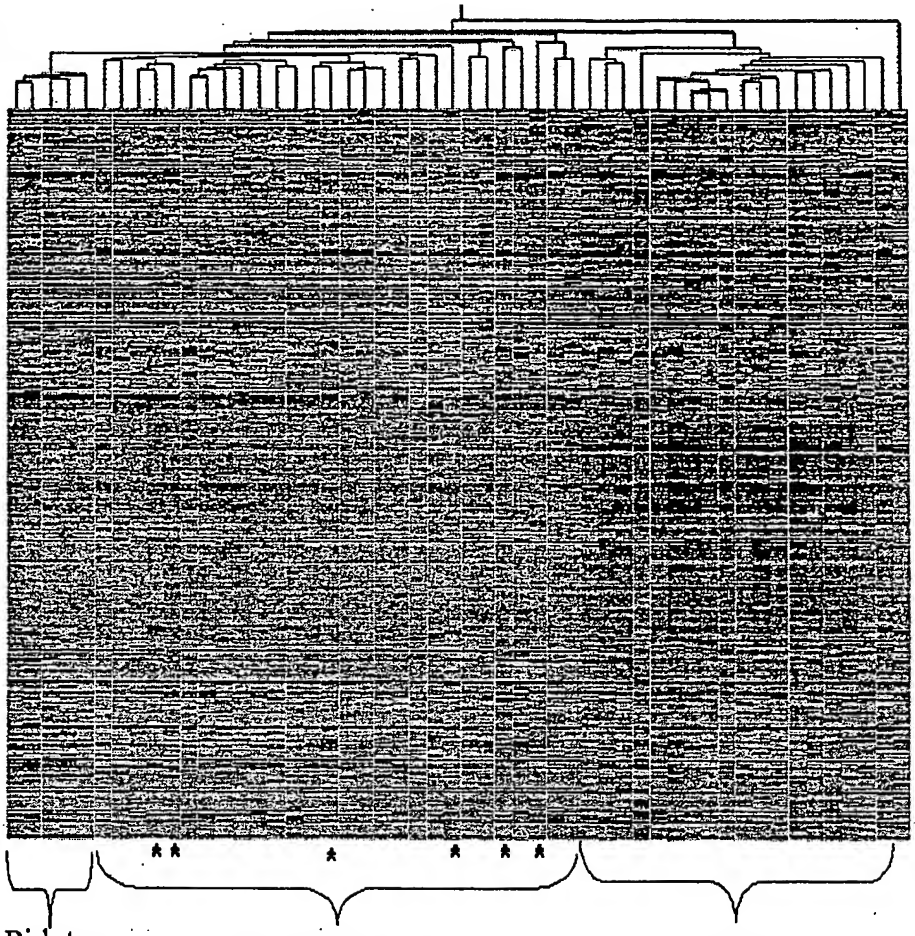
Non-obese: 20

Normal: 24

Differentially Expressed Genes ($p<0.05$): 1,147

Figure 14

Diabetes Type 2




Diabetes Type 2: 5

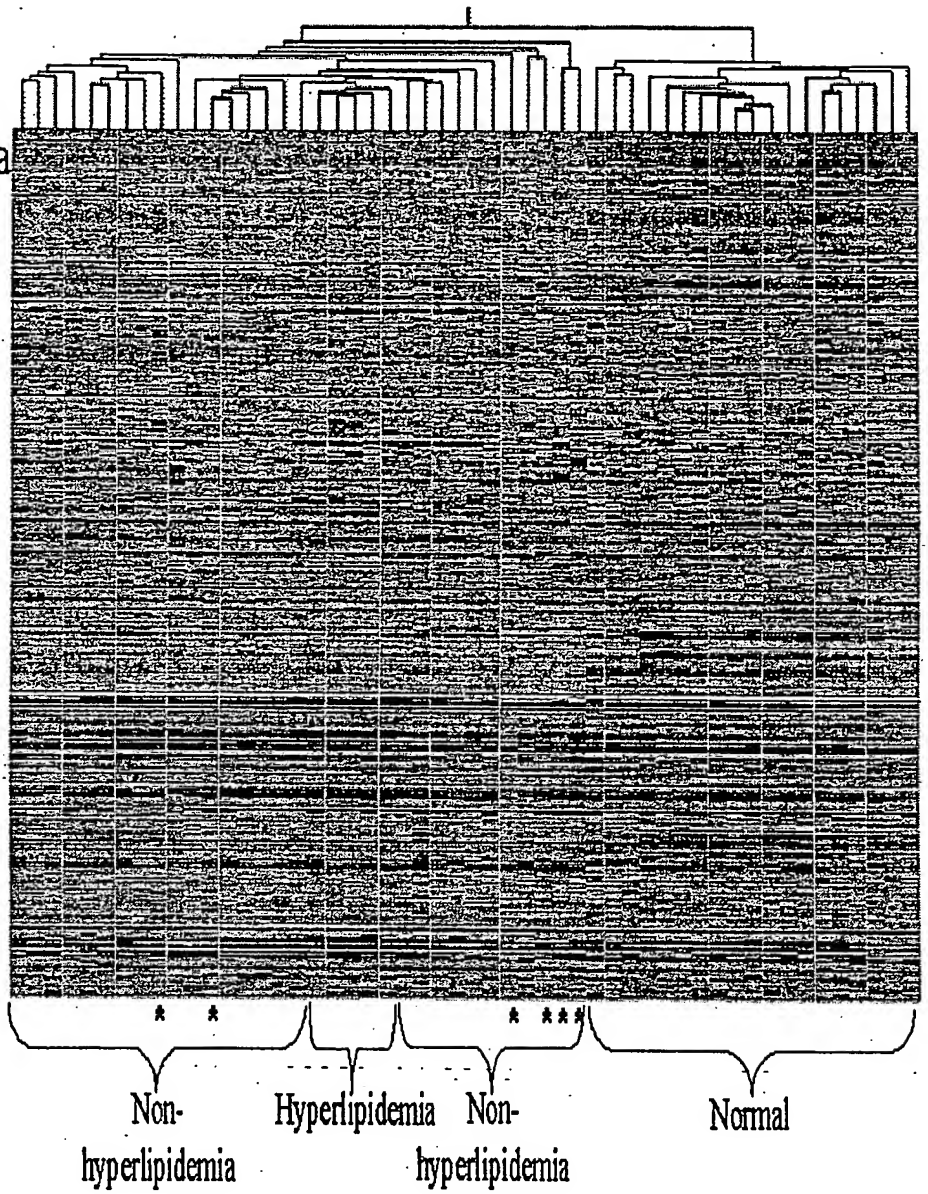
Non-diabetes Type 2: 23

Normal: 24

Differentially Expressed Genes ($p<0.05$): 915

Figure 15

Hyperlipidemia




Hyperlipidemia: 7

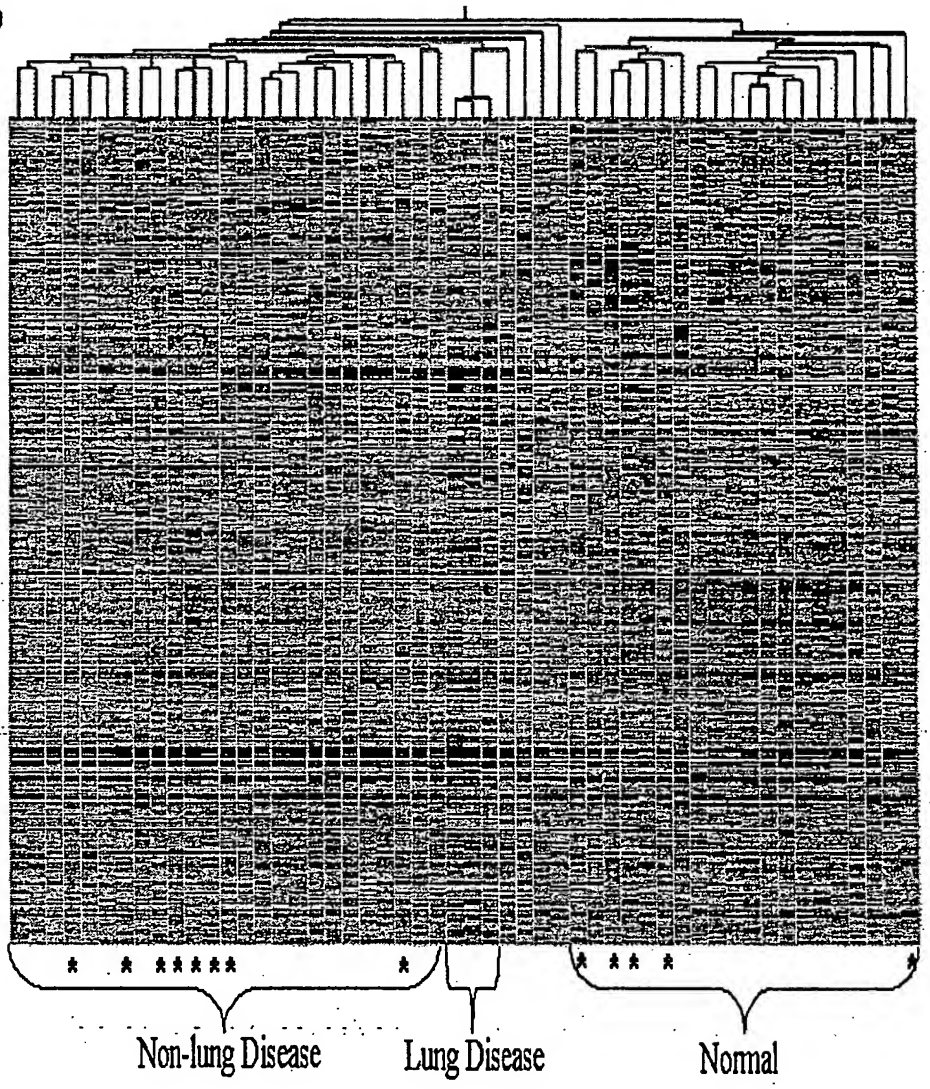
Non-hyperlipidemia: 21

Normal: 24

Differentially Expressed Genes ($p<0.05$): 1,022

Figure 16

Lung Disease




Lung Disease: 3

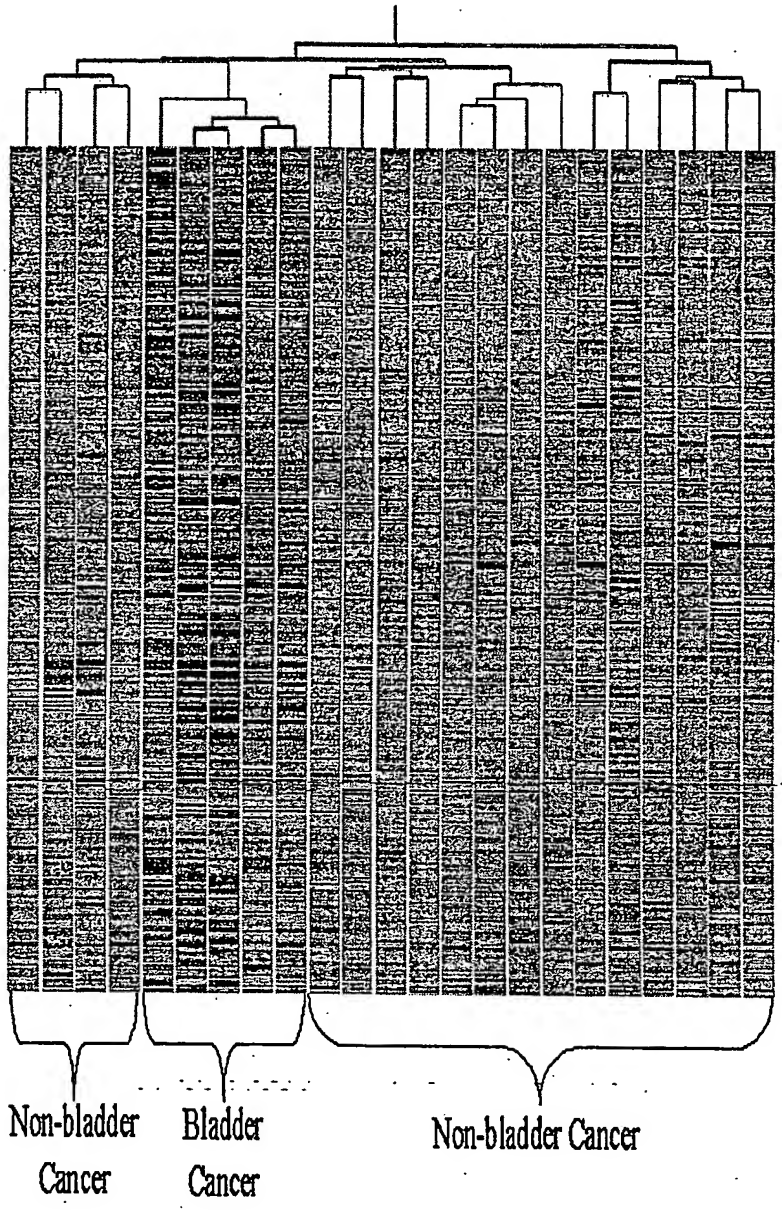
Non-lung Disease: 25

Normal: 24

Differentially Expressed Genes ($p<0.05$): 596

Figure 17

Bladder Cancer



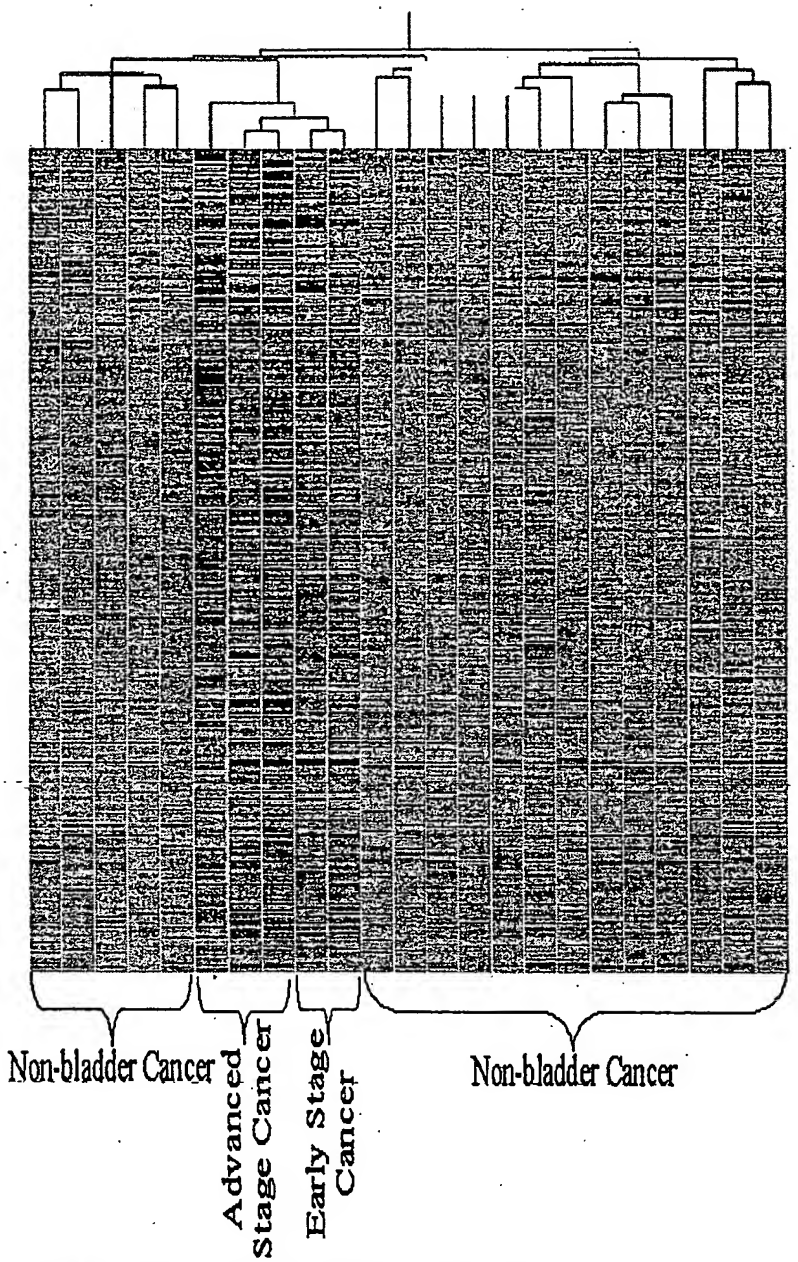

Bladder Cancer: 5

Non-bladder Cancer: 18

Differentially Expressed Genes ($p<0.05$): 4,228

Figure 18

Bladder Cancer



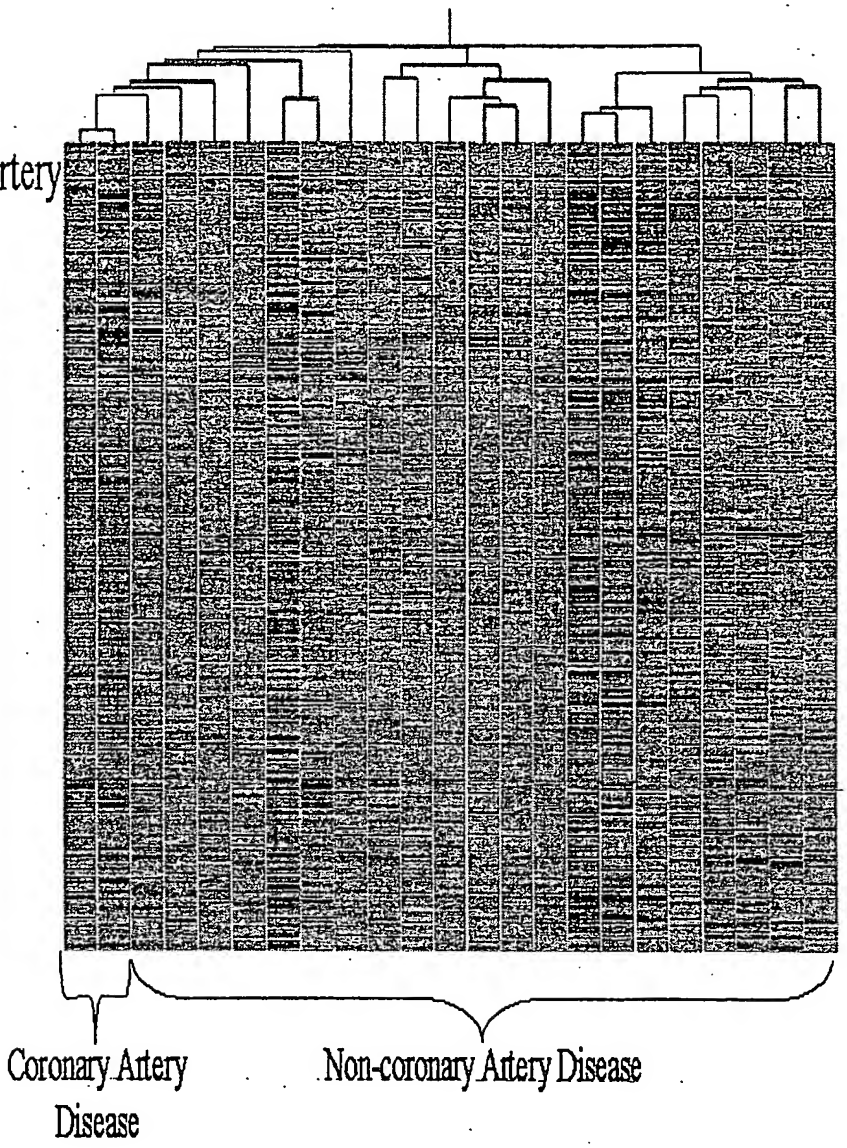

Bladder Cancer: 3 advanced stage, 2 early stage

Non-bladder Cancer: 18

Differentially Expressed Genes ($p<0.05$): 3,518

Figure 19

Coronary Artery Disease



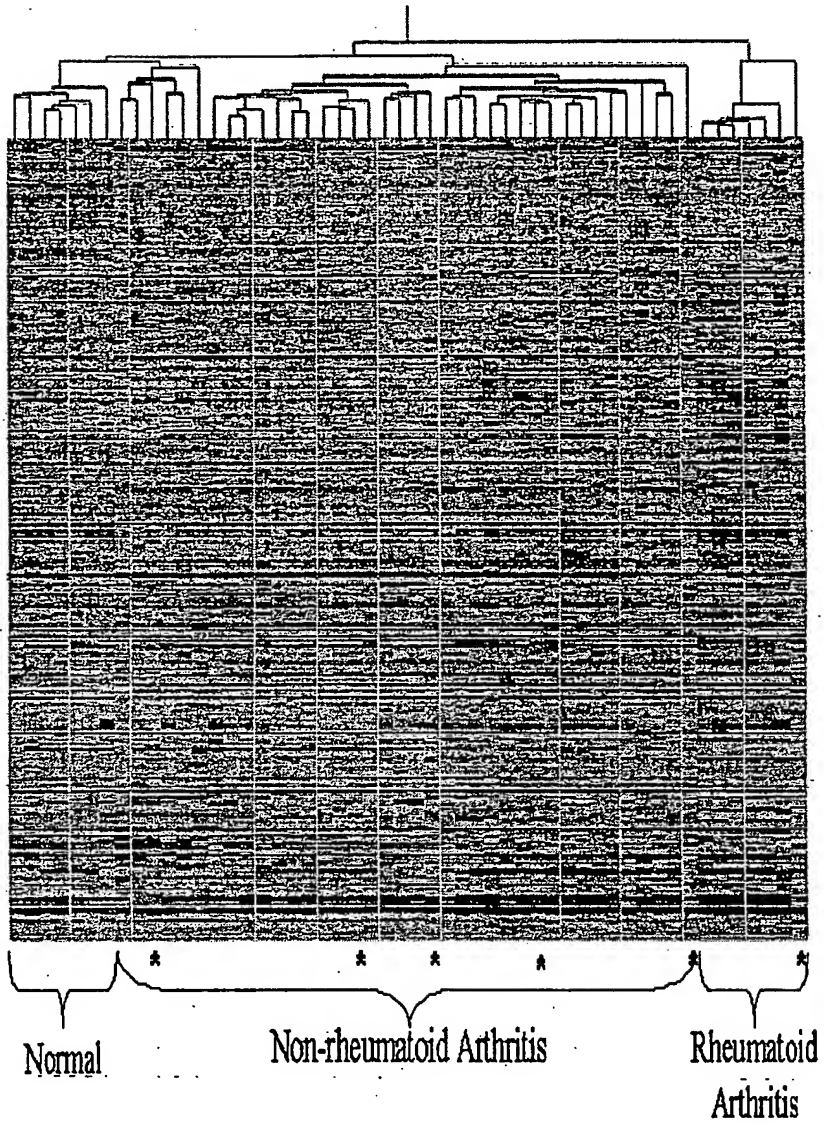

Coronary Artery Disease: 2

Non-coronary Artery Disease: 21

Differentially Expressed Genes ($p<0.05$): 967

Figure 20

Rheumatoid Arthritis




Rheumatoid Arthritis: 6

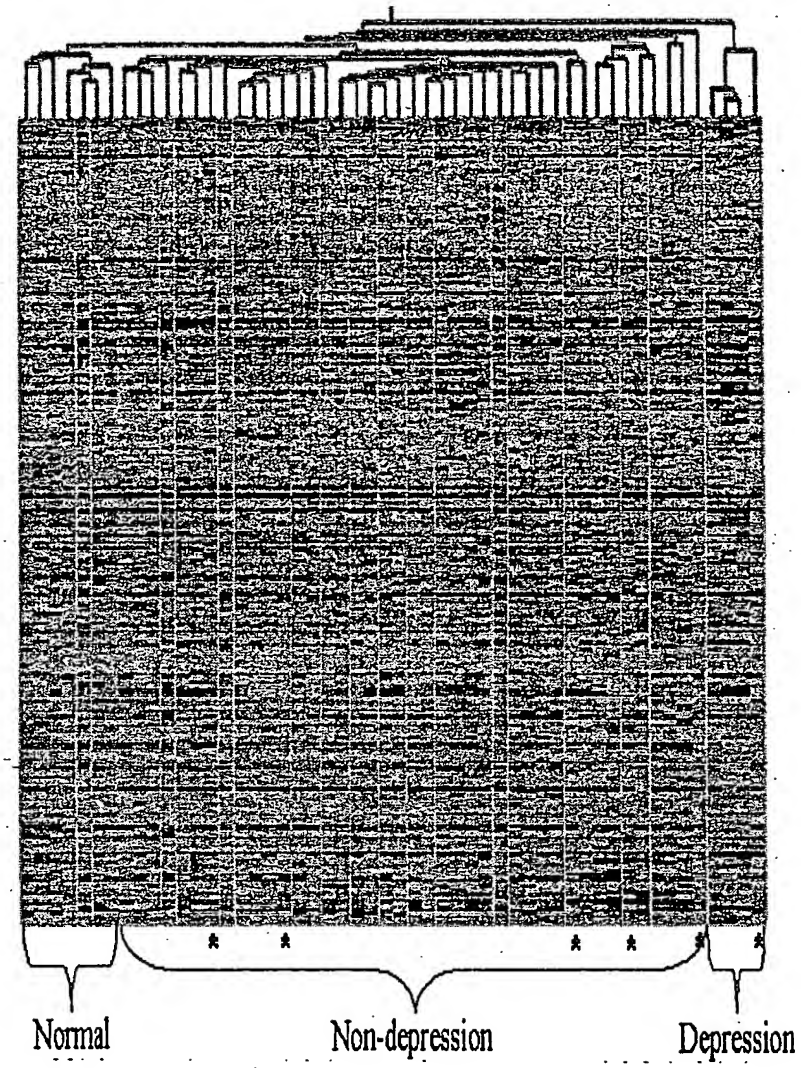
Non-rheumatoid Arthritis: 34

Normal: 12

Differentially Expressed Genes ($p<0.05$): 2,068

Figure 21

Depression




Depression: 3

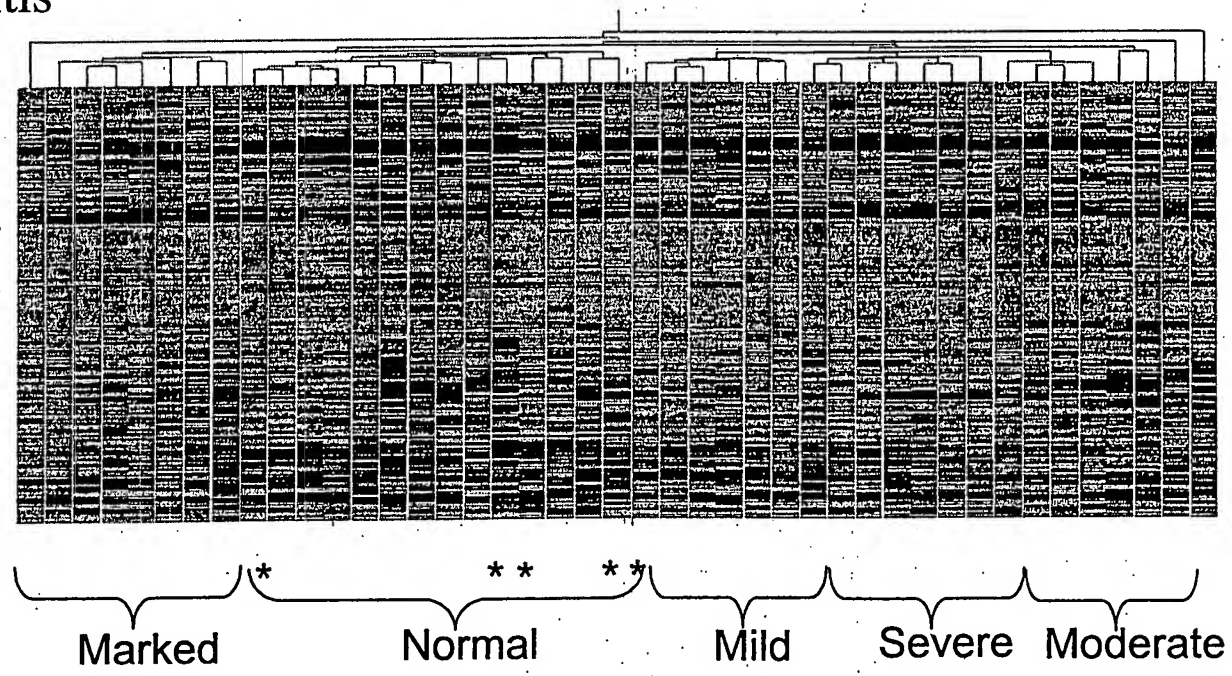
Non-depression: 37

Normal: 12

Differentially Expressed Genes ($p<0.05$): 941

Figure 22

Osteoarthritis




Osteoarthritis: 9 mild, 8 moderate, 8 marked, 9 severe

Normal: 9

Differentially Expressed Genes ($p<0.05$): 300

**Figure 23** RT-PCR of overexpressed genes in CAD peripheral blood cells identified using microarray experiments, including PBP, PF4 and F13A.

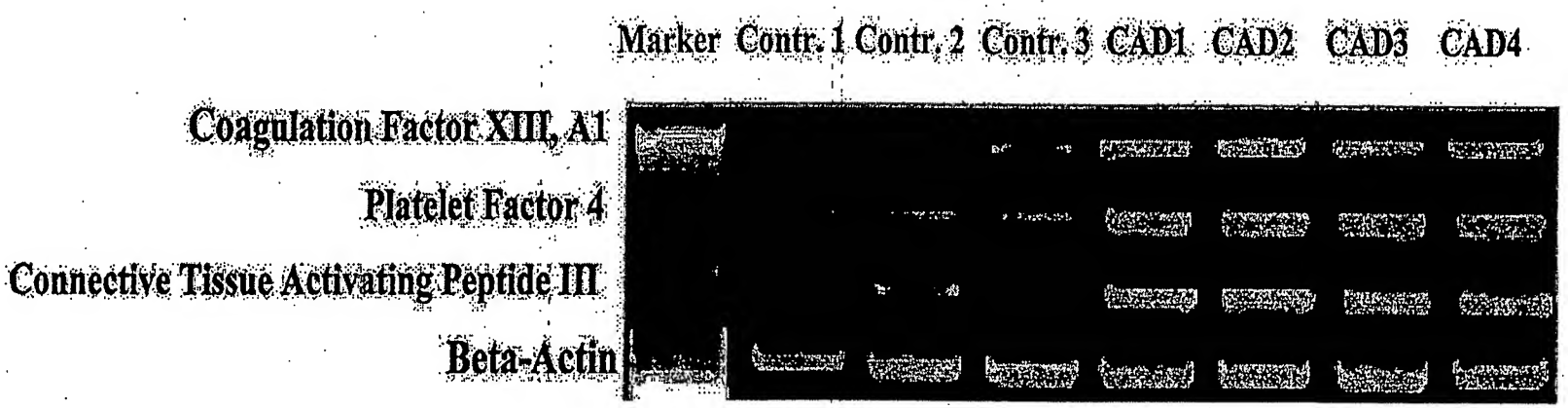


Figure 24

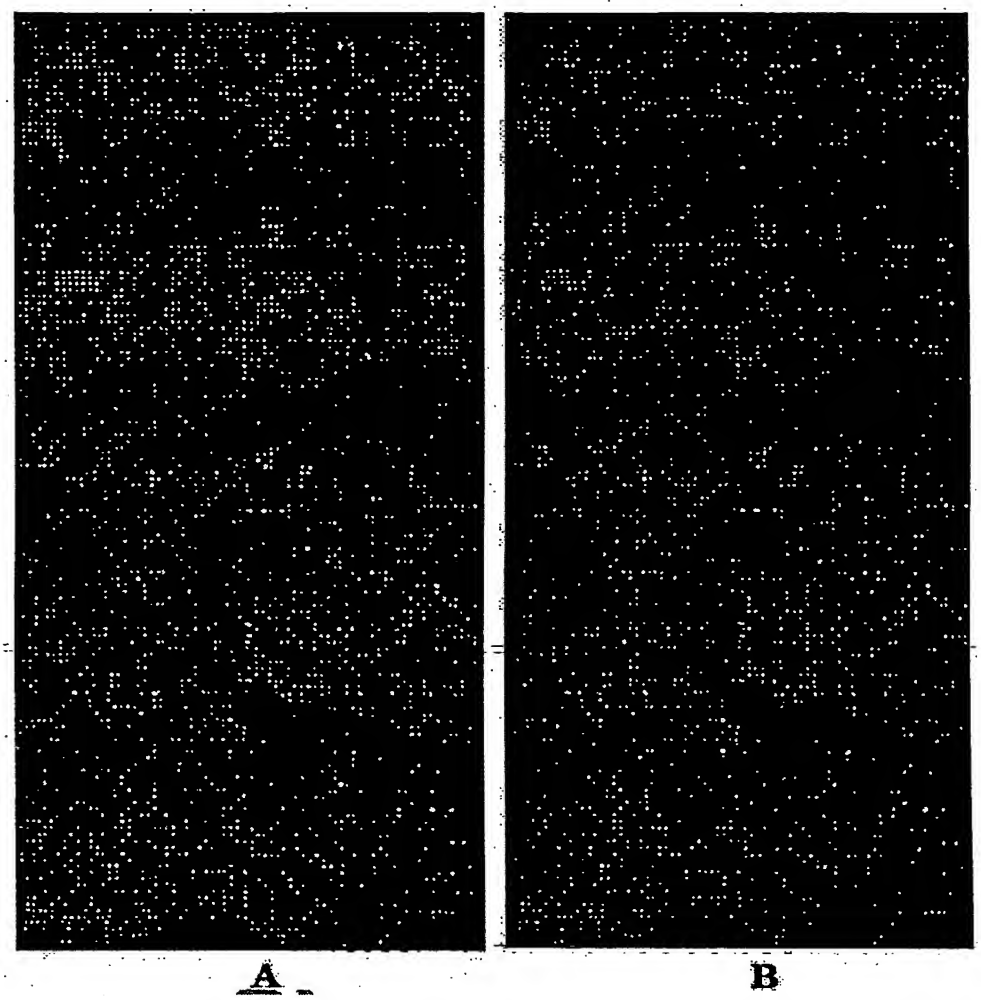
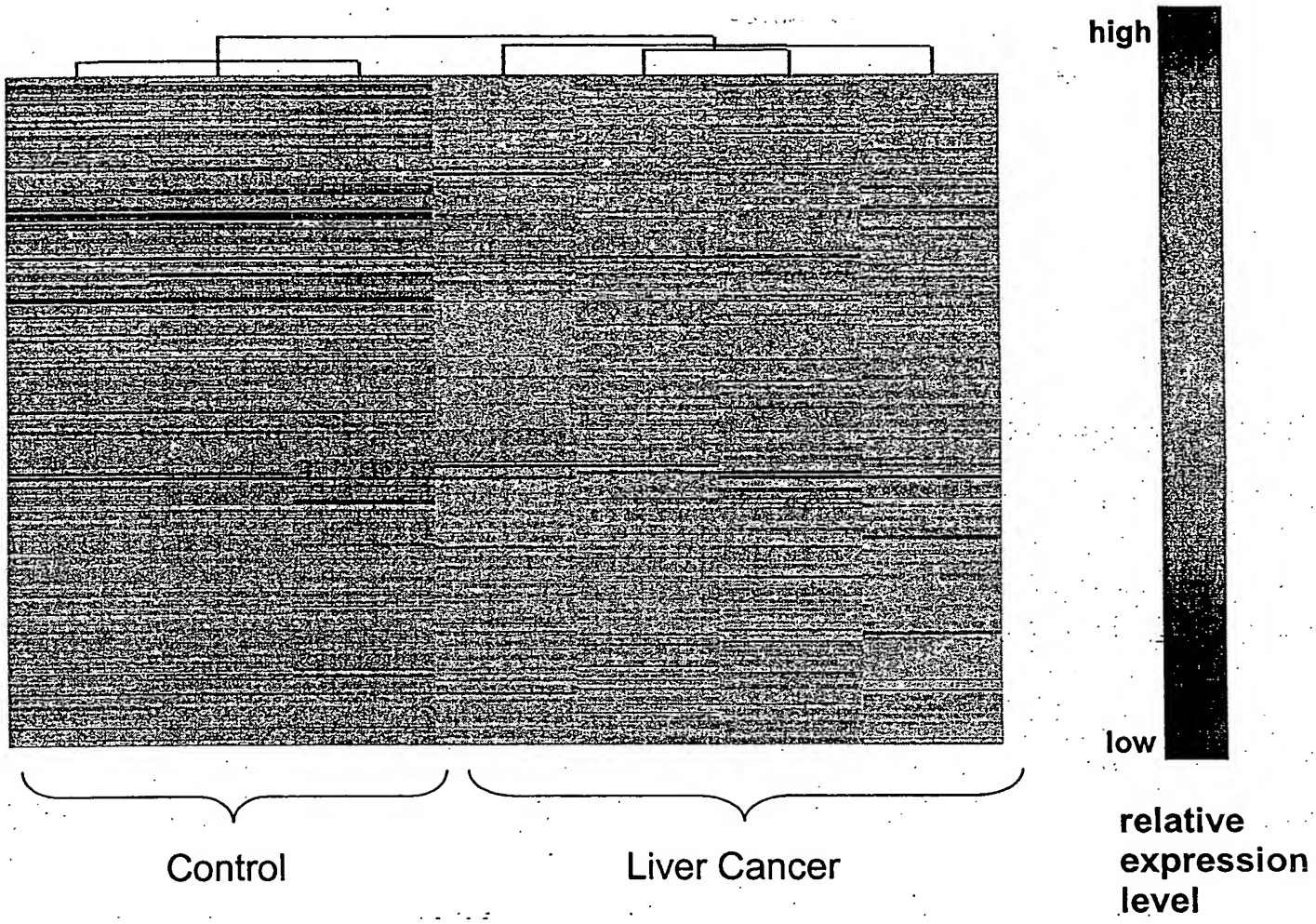


**Figure 25**

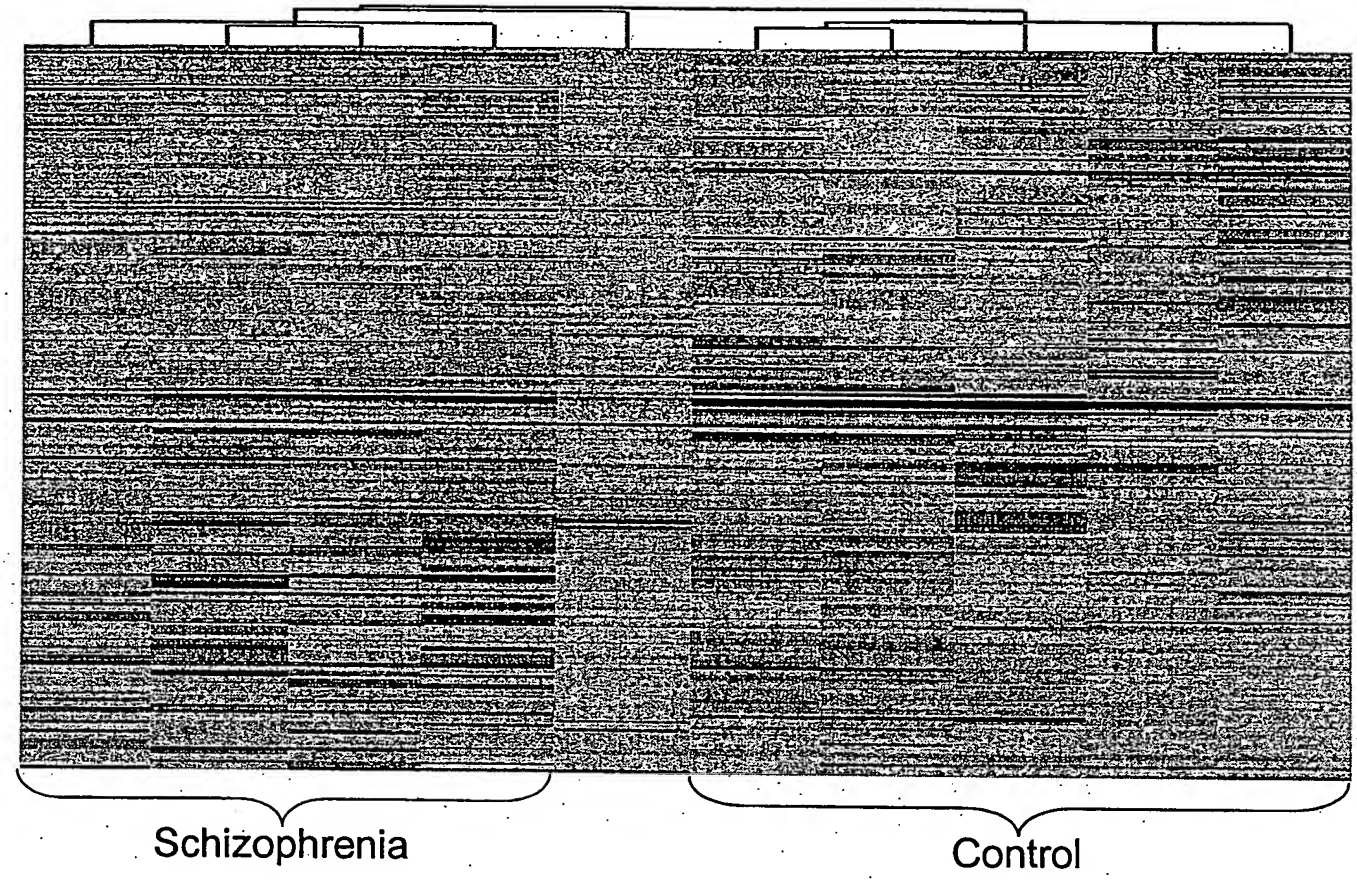
**Liver Cancer**




Control (red): n=3; Liver Cancer (orange): n=4

**Figure 26**

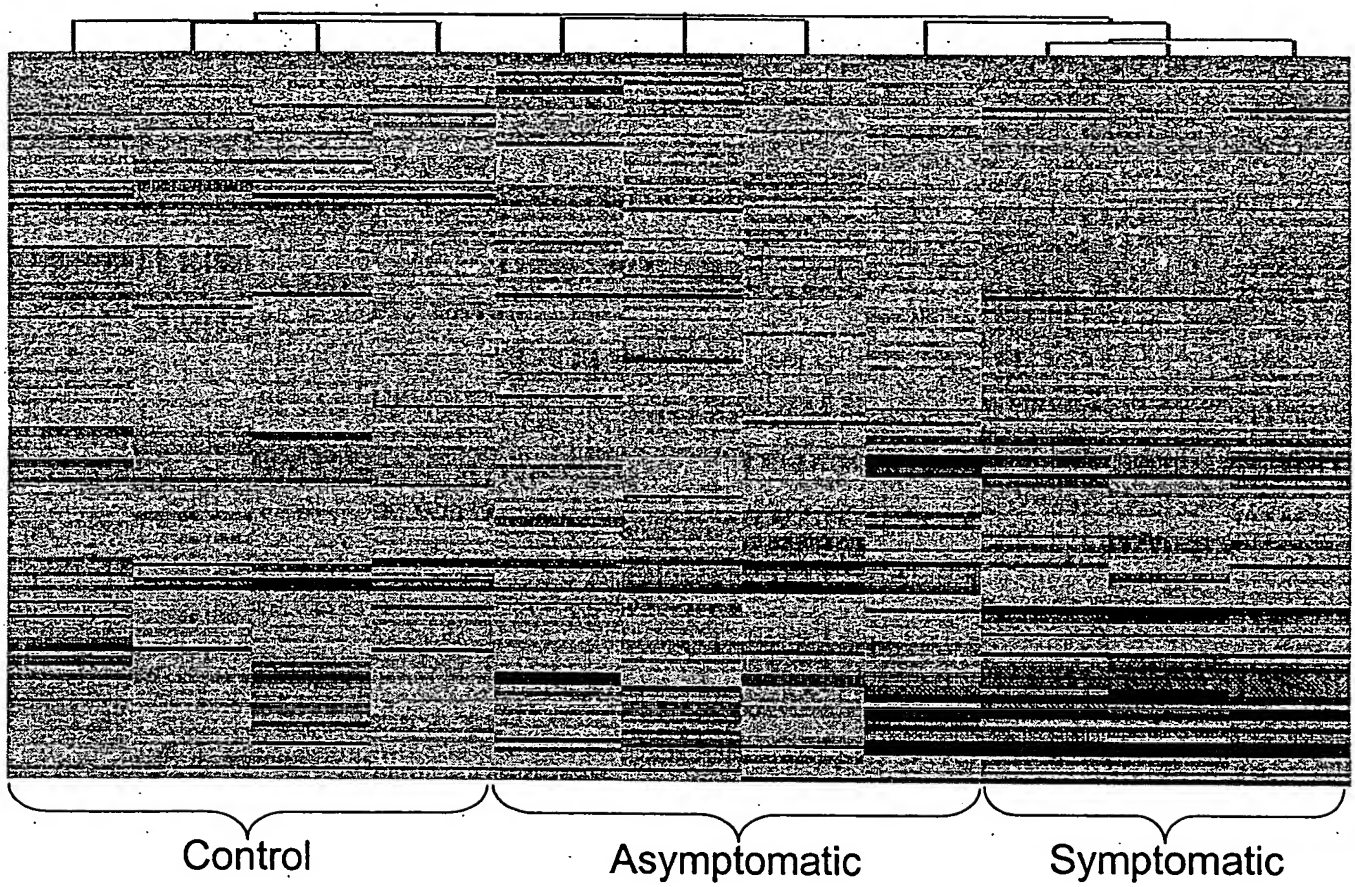
**Schizophrenia**




Control (red): n=6; Schizophrenia (orange): n=4

p<0.005
252 genes

**Figure 27**
**Chagas Disease**

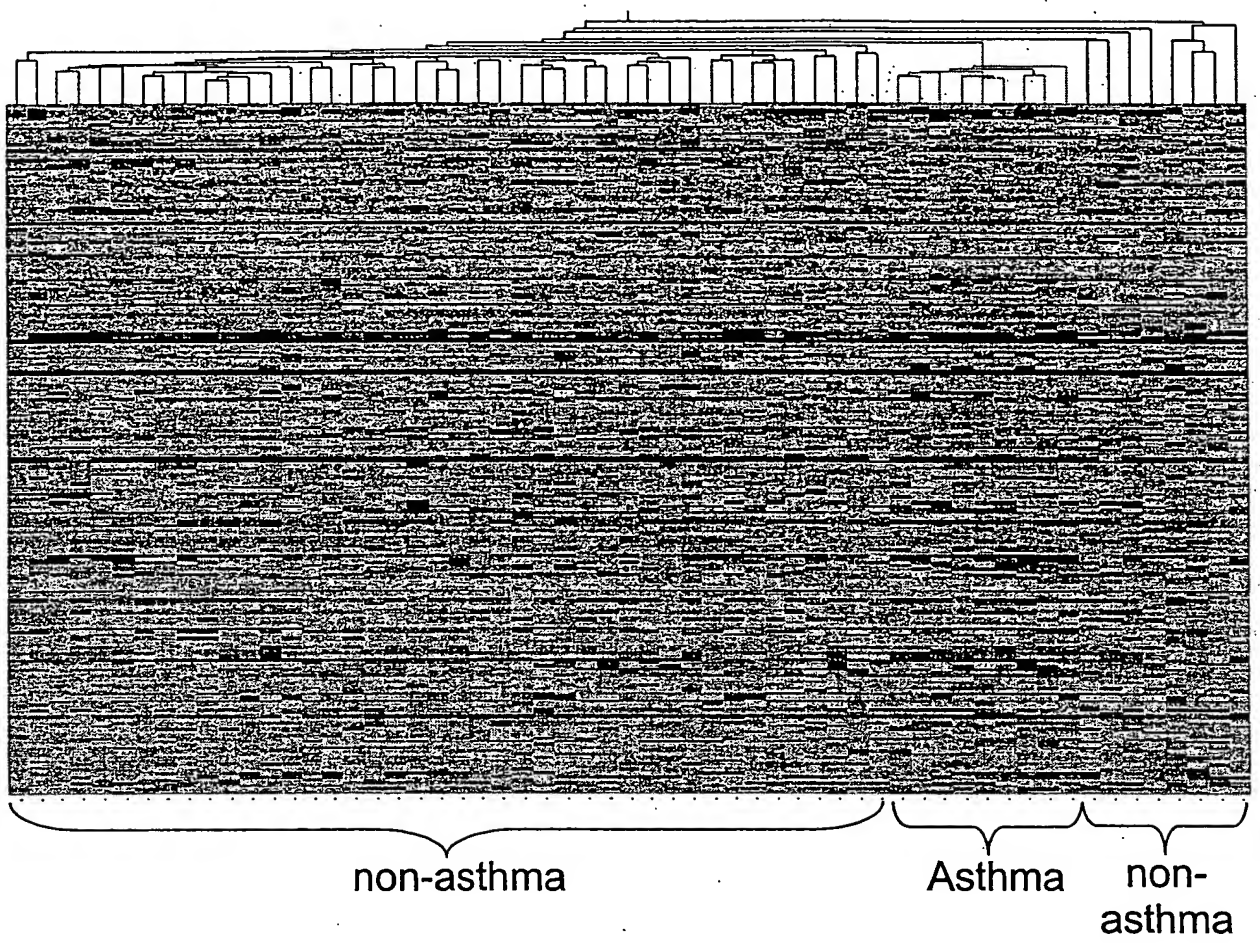



Control (orange): n=4; Chagas' asympt. (red): n=4;
Chagas' sympt. (yellow): n=3

$p<0.01$
155 genes

# Figure 28

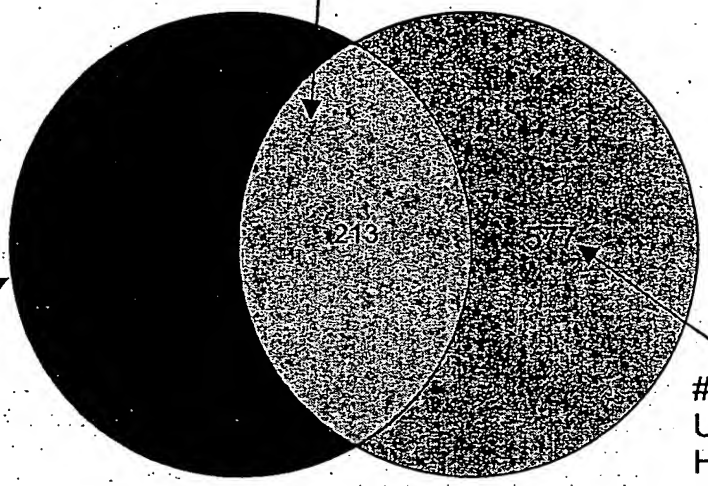
## Asthma




Asthma: n=9 Non-asthma: n=50

p<0.05
219 genes

Figure 29




Intersecting Genes (Table 3Q)

# Genes OA and Hypertension v. Normal (Table 3A-648+213)

# Genes Unique to Hypertension (Table 3P)

Figure 30

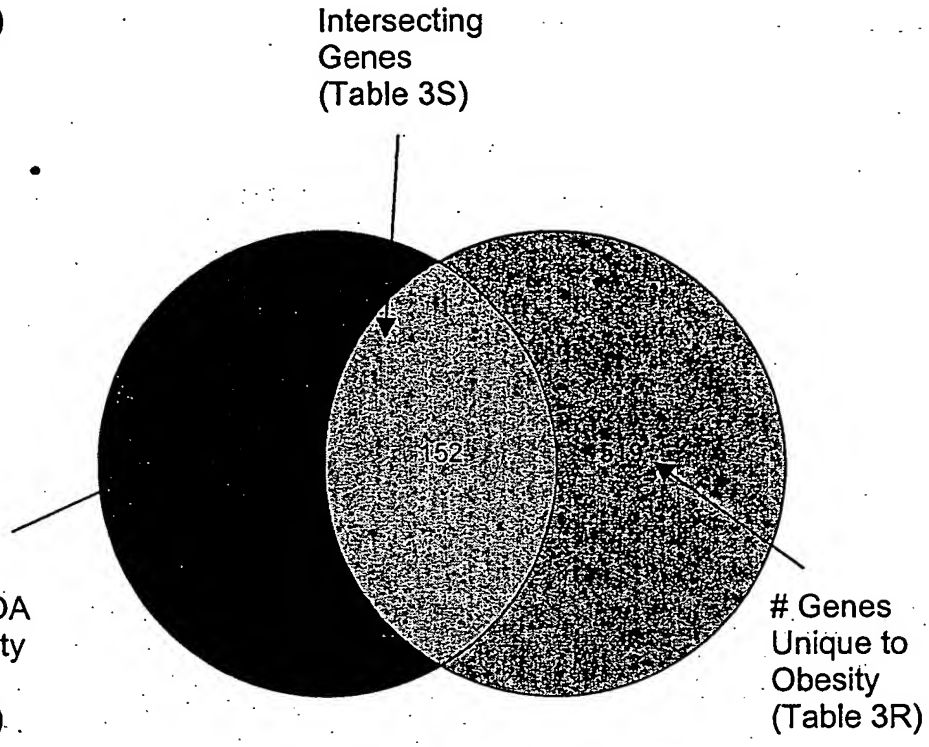

Intersecting Genes (Table 3S)
152
519
# Genes OA and Obesity v. Normal (Table 3B)
# Genes Unique to Obesity (Table 3R)

Figure 31

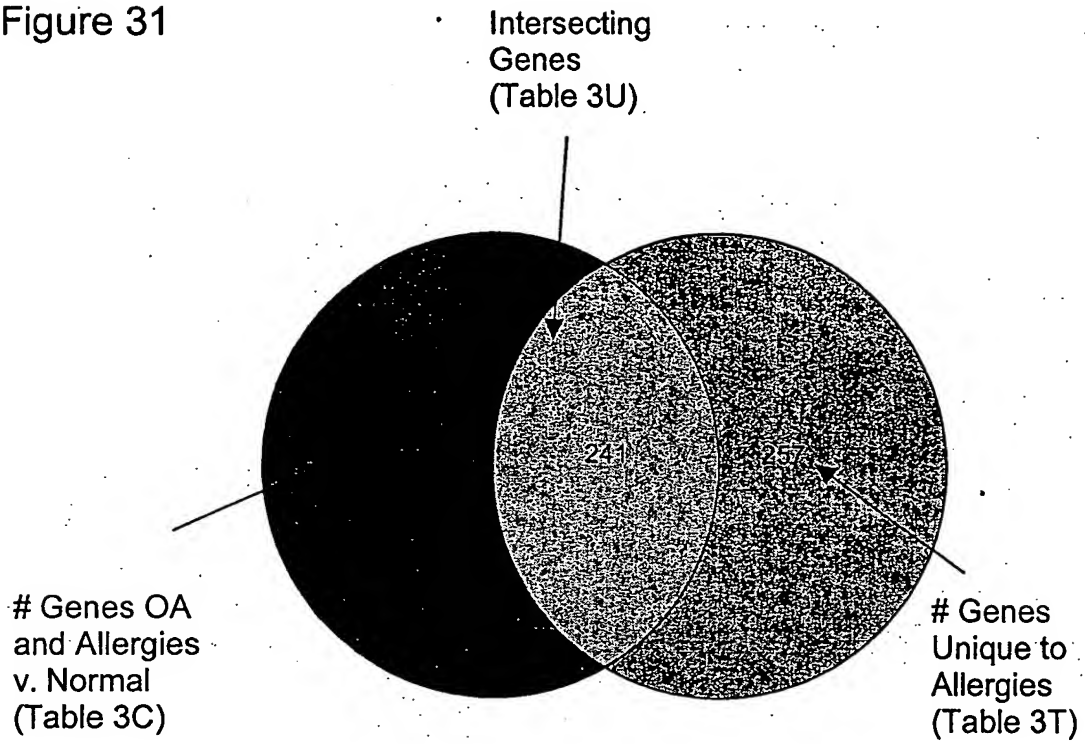

Intersecting Genes (Table 3U)
24
257
# Genes OA and Allergies v. Normal (Table 3C)
# Genes Unique to Allergies (Table 3T)

Figure 32

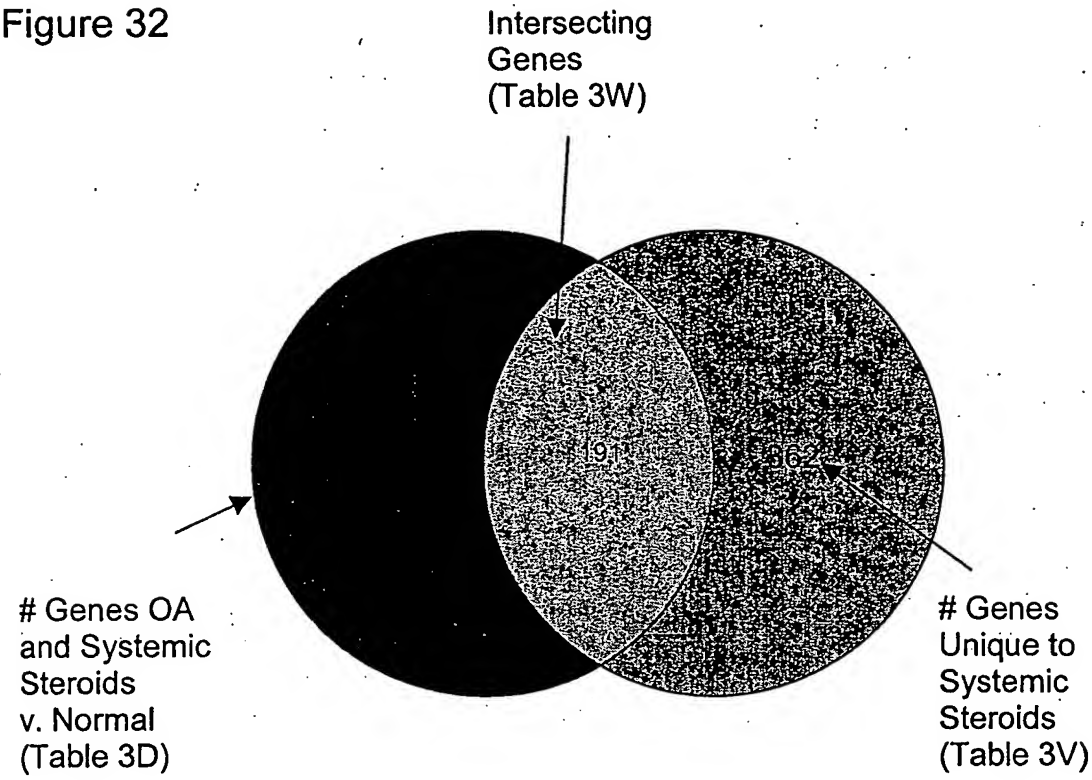
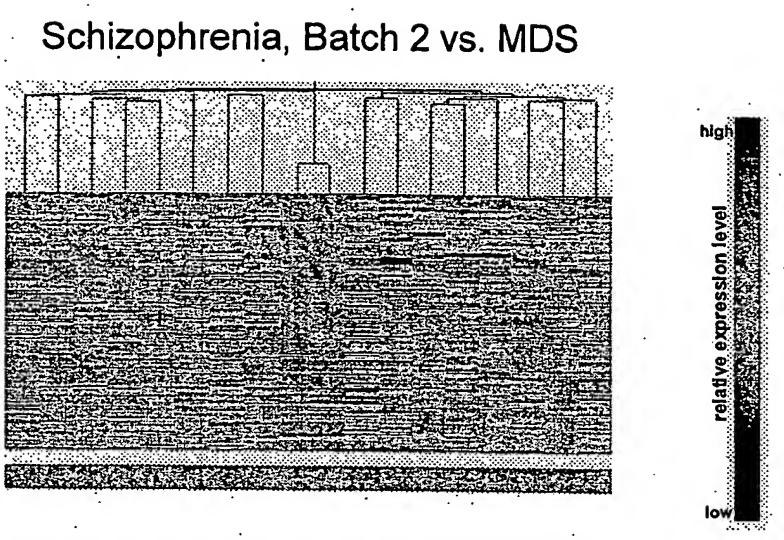

Intersecting Genes (Table 3W)
191
362
# Genes OA and Systemic Steroids v. Normal (Table 3D)
# Genes Unique to Systemic Steroids (Table 3V)

Figure 33

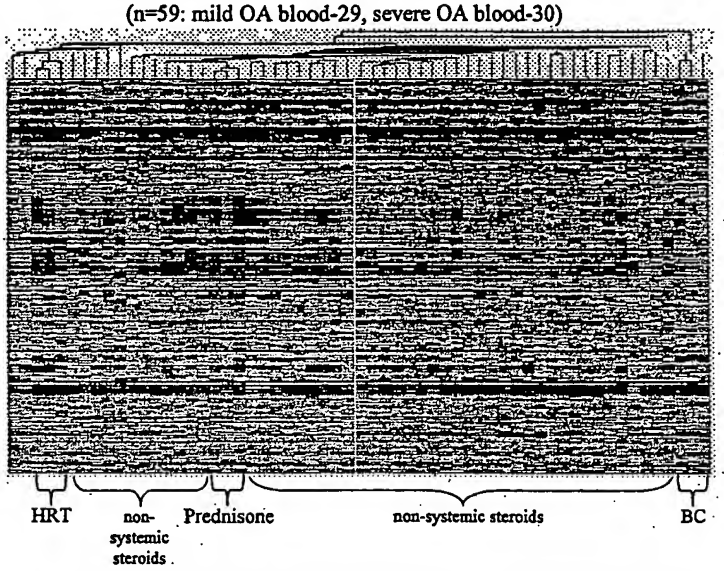



p<0.05
294 genes

MDS = Manic Depression Syndrome

Figure 34

OA Blood Samples Co-morbidities Study: Systemic Steroid Groups
(n=59: mild OA blood-29, severe OA blood-30)




Systemic Steroids (n=9): 3 prednisone, 3 birth control, 3 hormone replacement therapy
Non-systemic steroids: 50
Differentially Expressed Genes ($p<0.05$): 396

HRT = hormone replacement therapy; BC = birth control